

REMARKS

1, 2, 9-11, 13-15, 17, 19 and 20 are pending. Claim 1 is amended herein. Support for the amendment is at least found at pages 19-22 and Figs. 3A-3C of the specification.

Applicants' Response to the Claim Rejections under 35 U.S.C. §103(a)

Claims 1, 2 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumoto et al. (US 5,796,428) in view of Yokota et al. (JP 03-089682) in view of Chamberlain (US 5,221,964).

In response thereto, applicants respectfully submit that the combination of references does not render the claimed invention as now presented obvious for at least the reasons that the combination does not teach all the features of the claims, nor is there any basis whereby a skilled artisan could derive these features from the disclosures of the references or the general knowledge of the art.

Specifically, the combination of references does not provide for the features of the present invention that the main board mounts a main CPU and that the electronic circuit board is disposed vertically to an image pickup axis bent by the optical axis alternation means and the main board is disposed in parallel to the bent image pickup optical axis.

The rejection maintains that Chamberlain discloses the feature of claim 1 that the electronic circuit board mounts a circuit for processing image pickup signal but does not physically contact the main board, and appears to maintain that the position of the electronic

circuit board between the main board and the bottom housing of the apparatus is also obvious based on Chamberlain.

Specifically, page 3 bridging to page 4 of the Office Action states that: "Chamberlain discloses a modular camera wherein optional expansion boards may be placed behind the image sensor board so that the camera may be reconfigured (Figure 16 and 17; c. 7, l. 63 - c. 8, l. 3). The expansion boards of Chamberlain are not in direct physical contact with the image sensor board (Figures 16 and 17). Therefore, it would be obvious to include the ability to add optional expansion boards in the camera of Matsumoto in view of Yokota to allow a user to reconfigure and expand the functionality of the camera as desired."

First, applicants respectfully submit that the expansion boards 19 of Chamberlain is not equivalent to a main board as set forth in the present invention. In Chamberlain, the device comprises a logic board means 18 which is connected to a driving board means 13 via buses 25, 27. Further, an image sensor 17 is connected to the driving board means 13. See col. 5, lines 40-54 and Fig. 2. Hence, to one of skill in the art, Chamberlain's equivalent of a main board is the logic board means 18, and the driving board 13 with the image sensor 17 connected thereto is more likely equivalent to the electronic circuit board mounting a circuit for processing image pickup signal. In Chamberlain, the logic board 18 is clearly in direct contact with the driving board via the buses 25, 27. In regard to the optional electric board 19 which the rejection cites, this board does not appear to have any equivalency to the features of claim 1. Wherefore, applicants respectfully submit that it would not be obvious in light of Chamberlain to modify a device of Matsumoto and Yokota so that a main board is not in contact with an image processing

signal board. There is no reason for a skilled artisan to derive the configuration of main board and image sensor signal board as claimed. This is also true for the feature of claim 1 that the electronic circuit board is between the main board and the bottom housing of the apparatus.

In regard to the feature that the electronic circuit board is between the main board and the bottom housing of the apparatus, page 4 of the Office Action states that: "It is noted that due to the configuration of the camera as taught by Matsumoto and Yokota, it would be obvious to place the expansion boards below the image sensor so that the boards would be inline with [and] parallel to the image sensor board as shown by Chamberlain."

As noted above, the expansion boards 19 are not equivalent to a main board as set forth in current claim 1. Further, Chamberlain only teaches that the logic board 18 and the driving board 13 are stacked facing the back plate 12 of the camera. This configuration is specifically adopted by Chamberlain to allow for the modulation of various components of the camera. See col. 1, line 51 to col. 2, line 40. The camera of Chamberlain is directed to a video camera with analog to digital conversion requirements or similar. Contrary, Matsumoto and Yokota are directed to still photography cameras. There is no reason for a skilled artisan to expect still photography camera's to utilize modulation as in Chamberlain. As such, there is no basis for a skilled artisan to reform the boards of a Matsumoto and Yokota device so as to allow for modulation, or for modulation of a main board or a image sensor circuit board

Contrary, in the present invention by combining the above constituent features to the disposition of the main board and the electronic circuit board, an advantage is obtained such that

it is possible to more efficiently mitigate the effect of noise on the image pickup signal from the image pickup device and to make the camera smaller.

Neither Chamberlain, nor the other previously cited documents contain a disclosure or suggestion with respect to such an advantage, nor is there any other reason provided within the references or the art which could lead a skilled artisan to adopt applicants' claimed configuration.

Wherefore, applicants respectfully submit that the invention as set forth in parent claim 1 and its respective dependents is not obvious in light of the cited prior art under 35 U.S.C. §103(a).

Claims 9-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumoto et al. (US 5,796,428) in view of Yokota et al. (JP 03-089682) in view of Chamberlain (US 5,221,964) in view of Wakabayashi et al. (US 5,748,238).

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumoto et al. (US 5,796,428) in view of Yokota et al. (JP 03-089682) in view of Chamberlain (US 5,221,964) in view of Kikuchi (US 5,838,374).

Claims 15 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumoto et al. (US 5,796,428) in view of Yokota et al. (JP 03-089682) in view of Chamberlain (US 5,221,964) in view of Orbach et al. (US 4,732,438).

Claims 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsumoto et al. (US 5,796,428) in view of Yokota et al. (JP 03-089682) in view of Chamberlain (US 5,221,964) in view of Chigira (US 5,298,933).

As claims 9-11, 13, 15, 17, 19 and 20 all depend from parent claim 1, by addressing the rejection thereof as detailed above, the rejections of these claims should likewise be considered addressed by nature of their dependency.

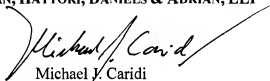
In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to read "Michael J. Caridi", is written over a horizontal line.

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